



WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: 2002VI3B

Title: Seasonal to Century Scale Climate Effects on the Water Resources of the U.S. Virgin Islands

Project Type: Research

Focus Categories: Climatological Processes, Drought, Surface Water

Keywords: Atmospheric Processes, Climate, Data Analysis, Drought, Rainfall, Statistics, Time-Series

Start Date: 04/01/2002

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Congressional District:

Principal Investigators:

Amos Winter
University of Puerto Rico

Henry H. Smith
University of the Virgin Islands

Abstract

The U.S. Virgin Islands are sensitive to precipitation fluctuations and lie in a region that is susceptible to droughts, extreme precipitation events, flooding and land slides with devastating consequences to the ecology, economy and well being of the island. Decision-makers need to know the probability of extreme precipitation events occurring in any given year and also the future precipitation patterns over the island. Surprisingly, very little rigorous statistical analysis has been made of the precipitation patterns even though much climate data for the Virgin Islands and other Caribbean islands has been collected since the beginning of the century. Here we propose, for the first time, to thoroughly examine the precipitation data for the Virgin Islands and then to compare the data to climatological indexes which have a bearing on the precipitation pattern in the Virgin Islands. In this way, we will be able to characterize the precipitation patterns including the determination of periodicity in the rainfall. Using the climatological indexes we then hope to be able to gain insight into tropical Atlantic climate linkages and to predict precipitation patterns.